



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,446	02/09/2000	Katsuhiko Tachibana	Q57866	2630

7590 01/21/2004
Sughrue Mion Zinn & Seas PLLC
2100 Pennsylvania Avenue NW
Washington, DC 20037

EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/500,446	TACHIBANA ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 6-7, 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

1. The request filed on 9/22/03 for Continued Examination under 37 CFR 1.114 based on parent Application No. 09/500,446 is acceptable and an RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 6 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION in view of Johnson et al. and further in view of Ehrenberg et al.

4. From a prior Office action:

4. NITTO DENKO discloses PSA compositions comprising polymers with polycarbonate structures, where the polycarbonates fit the applicant's general formula (abstract). Polymers having M_w values of 10,000-300,000 include polyesters synthesized using polycarbonate diols with dicarboxylic acids, polyesters synthesized using polycarbonate dicarboxylic acids and diols, and polyurethanes synthesized using polycarbonate diols and diisocyanates (p. 5 lines 40-47). The reference teaches using the PSA compositions in sealing material applications by applying the PSA to a synthetic resin film such as a foamed material (p. 11 lines 34-40), where the adhesive layer may be a multi-layer structure using other PSA compositions for improved adhesion (p. 11 lines 52-56). However, the reference lacks express mention of the cellular structures of the foam used or the multi-layer structure containing a "subbing" PSA layer. Johnson teaches a multi-layer sealant article, where a closed-cell foam sealant is provided with a bonding layer, preferably an acrylic PSA layer (abstract; col. 3 lines 41-49; col. 20 lines 10-34). The use of tie or primer layers between the foam sealant and the bonding layer improves adhesion between the foam and bonding layer, where suitable tie/primer layers include PSA compositions (col. 8 line 58-col. 9 line 4). It is the examiner's position that it would have been prima facie obvious to form a multi-layer adhesive structure containing a tie layer to improve the adhesion between the PSA and sealing materials of NITTO DENKO's invention. Note that Johnson et al. prefers the use of closed-cell sealant foams in the invention but does not specify motivation for choosing such a material. Ehrenberg teaches that closed cells in a foam material serve to improve the water impermeability of a sealing strip material (col. 6 lines 24-27). From the teachings of Johnson and Ehrenberg, it is the examiner's position

that it would have been prima facie obvious to use a foam material having closed cells to improve the water impermeability of NITTO DENKO's sealant articles.

5. Regarding claims 12-13 limiting the inner PSA layer, it has been shown that NITTO DENKO suggests using multi-layered adhesive structures using other PSA compositions (see p. 9 lines 32-47; p. 11 lines 52-56). However, the reference does not specifically indicate PSA compositions to be used with the polycarbonate adhesive in multi-layered PSA structures. The reference does teach the conventionality of acrylic and rubber adhesives (p. 8 lines 29-34; p. 9 line 58-p. 10 line 7; p. 12 lines 17-25). Furthermore, the polycarbonate adhesives of the reference employ acrylic polymers into the compositions (p. 8 lines 24-57), showing the acrylic polymer's increased adhesion to plastic substrates. Because of the conventionality of acrylic adhesives, and because the acrylic polymers are already present in the polycarbonate layer, it is the examiner's position that it would have been prima facie obvious to choose an acrylic PSA composition to use in a multi-layered structure with the polycarbonate layer to improve the adhesion of the adhesives to the substrate.

5. Additionally, note that Johnson teaches polymeric films including thermoplastic polyamides as tie layers. This would suggest the claimed subbing base material of claim 6.

6. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION in view of Johnson et al. and Ehrenberg et al. as applied to claims 6 and 10-11 above, and further in view of Hartman et al.

7. From a prior Office action:

7. The references apply as above for a waterstop sealing material. NITTO DENKO also teaches that adhesives may be included on both sides of the foam substrate (p. 11 lines 52-56) and that the substrates may be composites of metal foils or resin films on synthetic resin films, where foamed materials are given as possible synthetic resin films (p. 11 lines 34-46). NITTO DENKO notes acrylic or rubber adhesives as conventionally used PSA compositions (p. 12 lines 17-25). However, the reference lacks mention of using a different PSA composition on the side opposite of the polycarbonate-containing PSA layer. Hartman discloses double-sided foam tapes, where acrylic and rubber adhesives are used. Hartman teaches that the use of different adhesive compositions on each side of the foam would be advantageous, since each adhesive layer is generally not adhered to the same substrate (col. 6 lines 38-52). Thus, it would have been prima

facie obvious to apply a different PSA to the opposing side of the foam sealing material to adhere the materials to two different substrates.

Allowable Subject Matter

8. Claims 1-5 are allowed.
9. The following is an examiner's statement of reasons for allowance:
10. The closest prior art, NITTO DENKO CORP, discloses a sealing material having a foamed substrate and a polycarbonate-containing PSA composition. However, the reference does not teach the use of an inner subbing PSA layer between the substrate and polycarbonate-containing PSA composition. The applicant has provided unexpected results to show that such a PSA subbing layer provides increased water sealing capabilities with lower compression. Therefore, it is the examiner's position that the sealing material of claim 1 provides a patentable step over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

11. In response to the applicant's arguments that the references do not teach the claimed waterstop and deterioration-reducing properties, it is first noted that the references are concerned with sealant materials and suggest the use of closed-cell foams. Thus, a degree of water stop sealing is inherently present. The applicant does

not quantify the water stop properties in the claims, nor does the applicant claim a deterioration-reducing property.

12. In response to the applicant's showing of unexpected results, note that the applicant has not provided such results for a structure of claim 6 not having a subbing PSA layer. Claim 6 is drawn to subbing plastic film or metal foil layers. The applicant has not shown unexpected results for these structures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb


RABON SERGENT
PRIMARY EXAMINER